I am a Comcast broadband internet customer, and I have been since I moved into my current residence about 5 years ago. I have generally been very happy with my service, and until last fall, I would have recommended Comcast's internet service to anybody.

However, in early October I began noticing problems with uploads (outgoing traffic). Connections were being broken for no discernable reason. It happened with multiple protocols, including FTP, but it was particularly noticeable with Bittorrent traffic; I could watch as a dozen or more connected downloaders were suddenly and simultaneously disconnected. After wasting a great deal of time troubleshooting my computer, my home router, and my home network equipment, I discovered that the disconnections were being caused by spurious session reset signals (commonly known as RST signals, a part of the TCP/IP protocol) that were breaking the connections. After some searching on the internet, I discovered I was not alone; many, many Comcast customers were experiencing the same problem, and had examined the problem in even deeper detail, determining that it was in fact Comcast that was inserting the forged RST signals.

Before I continue I should clarify one thing; I use my internet connection for legal purposes. I understand that many people falsely associate Bittorrent traffic with pirated movies or music, and as a result may not have much sympathy for me. While it is true that Bittorrent is unfortunately used for a great deal of piracy, Bittorrent has many legitimate uses. I download open source software via Bittorrent; OpenOffice.org, an open-source free alternative to Microsoft Office, is only available for download via Bittorrent. Many Linux distributions' preferred download method is Bittorrent. Even some games and other commercial software distribute patches and updates via the Bittorrent protocol. The internet video service Vuse, which I use, uses the bittorrent protocol. In fact, unlike other p2p networks like Kazaa and Limewire, the Bittorrent protocol was specifically designed to discourage piracy by being very centralized (requiring both a central "tracker" to coordinate all the peers and a central public website to host the .torrent file download).

I placed a call to Comcast tech support and was told flat out that they were not blocking or disconnecting any traffic. I talked to supervisors and got the same story. It was a bald-faced lie. After two more phone calls I got a supervisor who was honest with me, he said something was going on but the tech people weren't being told about it, but they were getting a lot of calls. The issue began popping up on tech news sites, and Comcast flatly denied doing anything to block traffic, **blatantly and obviously lying to customers**. Shortly after that I read a news story that the Associated Press had gotten reports of Comcast's shenanigans and tested it for themselves, confirming Comcast was blocking traffic. That news story can be found here: http://www.msnbc.msn.com/id/21376597/

Shortly thereafter Comcast admitted to "delaying" certain traffic. **This "explanation" was also a brazen lie, traffic is being disconnected entirely, not delayed**. I then read a news story that Comcast was threatening to fire any employees who spoke to customers about the issue, that story can be found here: http://arstechnica.com/news.ars/post/20071028-comcast-to-employees-talking-about-blocking-p2p-can-get-you-fired.html

In late November I read a news story that the Electronic Frontier Foundation had also independently verified the results. The EFF reports can be found here: http://www.eff.org/files/eff_comcast_report.pdf
and here: http://www.eff.org/files/packet-injection.pdf These reports detail precisely what Comcast is doing.

I started reading some reports that some users were discovering that they could get around the blocking by throttling their upload speeds in their software, or limiting the number of connections. It seems that there is some invisible threshold, once you cross it, the blocking is triggered. I called Comcast again, and after getting the usual "we do not block any kind of traffic in any way" lie, I called bullshit and tried to get a straight answer out of a manager. I told the guy I wanted to be a good customer, if they have rules about limits on uploads I don't want to break them, but I need to know where the line is if you don't want me to cross it. Just tell me what the rules are and I'll obey them. The "we aren't blocking anything" façade soon fell, but the closest thing I could get to a straight answer from him was "I'm very sorry, but I cannot talk about that".

So I began experimenting myself, and I eventually discovered that if I cap all uploads at 256kbits/sec I can avoid the RSTs. My connection is now working fine, although I'm limited to 256kbits/sec upload even though my service is **advertised as 768kbits/sec**. In fact, I'm paying an extra $10 per month for the extra-fast service, yet I'm only able to use 1/3 of the advertised speed, which is less than the lower-cost service's advertised 384kbits/sec.

I have a big problem with Comcast discriminating against certain types of traffic in this way. I've paid them for my connection; it's none of their business what protocols or services I'm using it for. This incident has made me keenly aware of what activists are calling "network neutrality", and I am a fervent proponent of it.

I have an even bigger problem with Comcast placing arbitrary, unpublished limits below what they are advertising. If their network can't sustain a bunch of customers uploading at 768kbits/sec, **then don't sell 768kbits/sec service**. This is classic bait-and-switch. If they only intend to give me 256kbits/sec upload bandwidth, they should say so when I sign up. If they want to cap total monthly usage or similar limits, that's fine, just tell me about it.

I have the biggest problem with Comcast lying about it. If they had been upfront about it I probably wouldn't be writing this.